

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for detecting the fungus *Stachybotrys chartarum*, comprising:

isolating DNA from a sample suspected of containing the fungus *Stachybotrys chartarum*;

subjecting the DNA to polymerase chain reaction amplification utilizing at least one primer, wherein the at least one primer comprises one of a (~~SEQ. ID NO.~~ SEQ ID NO: 1)

5'GTTGCTTCGGCGGGAAC3' and (~~SEQ. ID NO.~~ SEQ ID NO: 2)

5'TTTGCGTTTGCCACTCAGAG3' base sequence; and

detecting the fungus *Stachybotrys chartarum* by visualizing the product of the polymerase chain reaction.

2. (Currently Amended) The method of claim 1, wherein subjecting the DNA to polymerase chain reaction further utilizes a probe comprising a base sequence (~~SEQ. ID NO.~~ SEQ ID NO: 5) 6-FAM-5'CTGCGCCCGGATCCAGGC3'-TAMRA.

3. (Withdrawn)

4. (Withdrawn)

5. (Withdrawn)

6. (Withdrawn)

7. (Withdrawn)

8. (Withdrawn)

9. (Withdrawn)

10. (Withdrawn)

11. (Withdrawn)

12. (Currently Amended) A method for detecting the presence of the fungus *Stachybotrys chartarum*, comprising:

obtaining a sample from the environment;

extracting DNA from the sample; and

amplifying the extracted DNA by polymerase chain reaction utilizing one or more primers to obtain an indication of the presence of *Stachybotrys chartarum* in the sample,

wherein the one or more primers comprise at least one of a (~~SEQ. ID NO:~~ SEQ ID NO: 1)

5'GTTGCTTCGGCGGGAAC3' and (~~SEQ. ID NO:~~ SEQ ID NO: 2)

5'TTTGCGTTTGCCACTCAGAG3' base sequence.

13. (Currently Amended) The method of claim 12, wherein amplifying the sample by polymerase chain reaction further utilizes a probe comprising a base sequence (~~SEQ. ID NO:~~ SEQ ID NO: 5) 6-FAM-5'CTGCGCCCGGATCCAGGC3'-TAMRA.

14. (Currently Amended) A method for detecting the presence of the fungus *Stachybotrys chartarum*, comprising:

obtaining a sample from the environment;

extracting DNA from the sample; and

BEST AVAILABLE COPY

amplifying the extracted DNA by polymerase chain reaction utilizing a primer set to obtain an indication of the presence of *Stachybotrys chartarum* in the sample, wherein the primer set comprises:

a forward primer comprising a base sequence (~~SEQ. ID NO.~~ SEQ ID NO: 1)
5'GTTGCTTCGGCGGGAAC3', and
a reverse primer comprising a base sequence (~~SEQ. ID NO.~~ SEQ ID NO: 2)
5'TTTGCGTTTGCCACTCAGAG3'.

15. (Currently Amended) The method of claim 14, wherein amplifying the sample by polymerase chain reaction further utilizes a probe comprising a base sequence (~~SEQ. ID NO.~~ SEQ ID NO: 5) 6-FAM-5'CTGCGCCCGGATCCAGGC3'-TAMRA.

16. (Currently Amended) A method for detecting the presence of the fungus *Stachybotrys chartarum*, comprising:

obtaining a sample from the environment;
extracting DNA from the sample; and
amplifying the extracted DNA by polymerase chain reaction utilizing a primer set to obtain an indication of the presence of *Stachybotrys chartarum* in the sample, wherein the primer set comprises:

a forward primer comprising a first base sequence (~~SEQ. ID NO.~~ SEQ ID NO:
3) 5'ACCTATCGTTGCTTCGGCG3', and
a reverse primer comprising a second base sequence (~~SEQ. ID NO.~~ SEQ ID
NO: 4) 5'GCGTTTGCCACTCAGAGAATACT3'.

17. (Currently Amended) The method of claim 16, wherein amplifying the sample by polymerase chain reaction further utilizes a probe comprising a base sequence (~~SEQ ID NO:~~ SEQ ID NO: 5) 6-FAM-5'CTGCGCCCGGATCCAGGC3'-TAMRA.

18. (Original) A method for identifying and quantifying the presence of the fungus *Stachybotrys chartarum* in a collected sample, comprising:

obtaining a primer set and probe that is specific for the fungal species *Stachybotrys chartarum*;

collecting the sample from the environment;

extracting the sample's DNA;

obtaining DNA standards from a culture of *Stachybotrys chartarum*;

determining the concentration of *Stachybotrys chartarum* spores in the DNA standards;

amplifying by polymerase chain reaction each of the DNA standards and the collected sample's DNA using the obtained primer set and probe; and

comparing amplification plots obtained by polymerase chain reaction of each of the DNA standards and the collected sample's DNA to obtain an indication of the presence of the fungus *Stachybotrys chartarum* in the collected sample and a concentration of the fungus *Stachybotrys chartarum* in the collected sample.

BEST AVAILABLE COPY